# REMARKS

## I. Status of Claims

Claims 13-34 are pending in the application. Claims 13, 23, 33, and 34 are independent.

Claims 13, 23, 33, and 34 are currently amended. Support for the additional language of the claims can at least be found in FIGS. 5, 6, and 8-11. Thus, the Applicant believes that no new matter is added.

Claims 13-16, 23, and 32-34 stand rejected under 35 USC 102(b) as allegedly being anticipated by Harndorf et al. (PCT Publication No. WO 02/38932) ("Harndorf").

Claims 17, 20, 24, and 27 stand rejected under 35 USC 103(a) as allegedly being unpatentable over Harndorf, as applied to claims 14, 15 and 16, respectively, above, in view of Tashiro et al. (USP 6,622,480) ("Tashiro").

Claims 18, 19, 21, 22, 25, 26, and 28-31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The Applicant respectfully requests reconsideration of these rejections in view of the foregoing amendments and the following remarks.

## II. Allowable Subject Matter

Claims 18, 19, 21, 22, 25, 26, and 28-31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

## III. Pending Claims

Independent claims 13, 23, 33, and 34 stand rejected under 35 USC 102(b) as allegedly being anticipated by Harndorf.

The Applicant respectfully submits that independent claims 13 and 33 are patentable over Harndorf at least because they recite, *inter alia*, "…the mode change range is set in accordance

with ***a state in which a great part of the accumulated particulate matter is eliminated from the exhaust purification apparatus***." (emphasis added)

The Applicant respectfully submits that claim 23 and 34 are patentable over Harndorf at least because they recite, *inter alia*, "…starting a burn-up heating mode for intermittently lowering the air-fuel ratio in the exhaust system by intermittently adding fuel to the exhaust when the estimated accumulation amount is ***within a mode change range set in accordance with a state in which a great part of the accumulated particulate matter is eliminated from the exhaust purification apparatus***." (emphasis added)

The Office Action alleges on pages 4-5 thereof that:

> Re claims 13 and 23, as shown in Figures 1-3, Harndorf et al. disclose[s]…
> - the mode change range is set in accordance with a comparatively small estimated accumulation amount (***when a determination that the regeneration of the filter has begun*** (i.e., when the down stream temperature of the filter is greater than the upstream temperature or the differential pressure across the filter is reduced by a predetermined value), ***only a small amount of particulate matter in the filter is combusted***); and
> - the mode change section changes the heating mode when the estimated accumulation amount is within the mode change range from a normal heating mode (second phase)…to a burn-up heating mode (third phase), for…

It is respectfully submitted that, as the Office Action recognizes, the mode change range of Harndorf is set in accordance with a state in which ***only a small amount of particulate matter in the filter is combusted***.

In sharp contrast, the mode change range of the inventions of claims 13, 23, 33, and 34 is set in accordance with a state ***in which a great part of the accumulated particulate matter is eliminated from the exhaust purification apparatus***. Accordingly, it is respectfully submitted that, the mode change range of Harndorf totally differs from the mode change range of the inventions of claims 13, 23, 33, and 34. Thus, since the mode change ranges of Harndorf and

certain embodiments of the present invention are different, it is respectfully submitted that Harndorf fails to anticipate the inventions of claims 13, 23, 33, and 34. The Applicant respectfully submits that "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

In addition, the Applicant respectfully submits that none of the other references cited identify a reason for modifying Harndorf in the manner as claimed by the Applicant. The Applicant respectfully submits that, as discussed in *KSR Int'l Co. v. Teleflex, et al.,* No. 04-1350, (U.S. Apr. 30, 2007), it remains necessary to identify the reason why a person of ordinary skill in the art would have been prompted to combine alleged prior art elements in the manner as claimed by the Applicant. Accordingly, claims 13, 23, 33, and 34 are also not rendered obvious by Harndorf in view of the other cited references.

The Applicant respectfully submits that, for at least these reasons, claims 13, 23, 33, and 34, as well as their dependent claims, are patentable over the cited references.

## IV. Conclusion

In light of the above discussion, the Applicant respectfully submits that the present application is in all aspects in allowable condition, and earnestly solicits favorable reconsideration and early issuance of a Notice of Allowance. The Examiner is invited to contact the undersigned at (202) 220-4420 to discuss any matter concerning this application. The Office is authorized to charge any fees related to this communication to Deposit Account No. 11-0600.

Respectfully submitted,

Dated: June 12, 2009

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